

Amendments to the Claims

Listing of Claims:

1-4. (Canceled)

5. (Currently Amended) A liquid crystal display apparatus comprising:

a first transparent substrate;

a second transparent substrate facing the first substrate;

a liquid crystal layer interposed between the first and second transparent substrates;

a color filter layer disposed on the second transparent substrate,

a single retardation layer having a cholesteric liquid crystal material disposed having a substantially uniform thickness on substantially the entire color filter layer, the retardation layer being configured to be coated on the color filter layer and fixed by an ultraviolet light;

a transparent electrode formed on the retardation layer; and

an alignment layer formed on the transparent electrode,

wherein the cholesteric liquid crystal material has a function of a biaxial film.

6. (Currently Amended) A liquid crystal display apparatus comprising:

a first transparent substrate;

a second transparent substrate facing the first substrate;

a liquid crystal layer interposed between the first and second transparent substrates;

a color filter layer disposed on the second transparent substrate;

a single retardation layer having a cholesteric liquid crystal material disposed having a substantially uniform thickness on substantially the entire color filter layer, the

retardation layer being configured to be coated on the color filter layer via micro gravure coating;

a transparent electrode formed on the retardation layer; and

an inorganic alignment layer formed on the transparent electrode,

wherein the cholesteric liquid crystal material has a function of a biaxial film.

7. (Canceled)

8. (Withdrawn) The liquid crystal display apparatus of claim 1, further comprising:

a pixel electrode formed on the first transparent substrate; and

an alignment film formed on the pixel electrode,

wherein the retardation layer is interposed between the pixel electrode and the alignment film.

9. (Withdrawn) A method of manufacturing a color filter substrate, comprising: forming a color filter layer on a transparent substrate; coating a liquid crystal material on the color filter layer; irradiating an ultraviolet light onto the liquid crystal material to form a retardation layer with a fixed alignment of liquid crystal molecules of the liquid crystal material, the retardation layer; forming a common electrode layer on the retardation layer; and forming an alignment film on the common electrode layer.

10. (Withdrawn) The method of claim 9, wherein the liquid crystal material is coated via a micro gravure coating method or a capillary coating method.

11. (Withdrawn) The method of claim 9, wherein the retardation layer comprises reactive mesogen mixture (RMM), polyvinylalcohol (PVA), polycarbonate (PC) or cycoolefin polymer (COP).

12. (Withdrawn) The method of claim 9, wherein the liquid crystal material corresponds to a cholestric liquid crystal.

13. (Withdrawn) The method of claim 9, wherein a polarized ultraviolet light is irradiated to form the retardation layer having a function of a biaxial film.

14. (Withdrawn) The method of claim 9, wherein a non-polarized ultraviolet light is irradiated onto the retardation layer to form the retardation layer having a function of a C-plate film.

15. (Withdrawn) A method of manufacturing a color filter substrate, comprising: forming a color filter layer on a transparent substrate; forming a protection layer on the color filter layer; coating a liquid crystal material on the protection layer; irradiating an ultraviolet light onto the liquid crystal material to form a retardation layer with a fixed alignment of liquid crystal molecules of the liquid crystal material, the retardation layer; forming a common electrode layer on the retardation layer; and forming an alignment film on the common electrode layer.

16. (Withdrawn) The method of claim 15, wherein the liquid crystal material is coated via a micro gravure coating method or a capillary coating method.

17. (Withdrawn) The method of claim 15, wherein the retardation layer comprised reactive mesogen mixture (RMM), polyvinylalcohol (PVA), polycarbonate (PC) or cycloolefin polymer (COP).

18. (Withdrawn) The method of claim 15, wherein the liquid crystal material corresponds to a cholestric liquid crystal.

19. (Withdrawn) The method of claim 15, wherein the ultraviolet light is polarized to form the retardation layer having a function of a biaxial film.

20. (Withdrawn) The method of claim 15, wherein the ultraviolet light corresponds to a non-polarized ultraviolet light to form the retardation layer having a function of a C-plate film.

21. (Withdrawn) A method of manufacturing a color filter substrate, comprising: forming a color filter layer on a transparent substrate; forming a protection layer on the color filter layer; forming a common electrode layer on the protection layer; coating a liquid crystal material on the common electrode layer; irradiating a ultraviolet light onto the liquid crystal material to form a retardation layer with a fixed alignment of liquid crystal molecules of the liquid crystal material, the retardation layer; and forming alignment film on the retardation layer.

22. (Withdrawn) The method of claim 21, wherein the liquid crystal material is coated via a micro gravure coating method or a capillary coating method.

23. (Withdrawn) The method of claim 21, wherein the retardation layer comprises reactive mesogen mixture (RMM), polyvinylalcohol (PVA), polycarbonate (PC) or cycloolefin polymer (COP).

24. (Withdrawn) The method of claim 21, wherein the liquid crystal material corresponds to a cholesteric liquid crystal.

25. (Withdrawn) The method of claim 21, wherein the ultraviolet light is polarized to form the retardation layer having a function of a biaxial film.

26. (Withdrawn) The method of claim 21, wherein the ultraviolet light corresponds to a non-polarized ultraviolet light to form the retardation layer having a function of a C-plate film.

27. (Withdrawn) A method of manufacturing an array substrate, comprising: forming a pixel electrode on a region of a substrate, such that the pixel electrode is electrically connected to a switching device, the region being defined by a gate line and a data line; coating a liquid crystal material on the pixel electrode layer; irradiating an ultraviolet light onto liquid crystal material to form a retardation layer with a fixed alignment of liquid crystal molecules of the liquid crystal material, the retardation layer; and forming an alignment film on the retardation layer.

28. (Withdrawn) The method of claim 27, wherein the liquid crystal material is coated via a micro gravure coating method or a capillary coating method.

29. (Withdrawn) The method of claim 27, wherein the retardation layer comprises reactive mesogen mixture (RMM), polyvinylalcohol (PVA), polycarbonate (PC) or cycloolefin polymer (COP).

30. (Withdrawn) The method of claim 27, wherein the liquid crystal material corresponds to a cholesteric liquid crystal.

31. (Withdrawn) The method of claim 27, wherein the ultraviolet light is polarized to form the retardation layer having a function of a biaxial film.

32. (Withdrawn) The method of claim 27, wherein the ultraviolet light corresponds to a non-polarized ultraviolet light to form the retardation layer having a function of a C-plate film.

33-35. (Cancelled)

36. (Canceled)

37. (Previously Presented) The liquid crystal display apparatus of claim 5, wherein the retardation layer comprises reactive mesogen mixture (RMM), polyvinylalcohol (PVA), polycarbonate (PC) or cycoolefin polymer (COP).

38. (Previously Presented) The liquid crystal display apparatus of claim 5, wherein the retardation layer is coated via a micro gravure coating method.

39. (Previously Presented) The liquid crystal display apparatus of claim 6, wherein the inorganic alignment layer comprises at least one selected from the group consisting of silicon oxide (SiO₂), a metal oxide such as magnesium oxide (MgO), magnesium fluoride (MgF₂) and gold (Au).

40. (Previously Presented) The liquid crystal display apparatus of claim 6, wherein the retardation layer comprises reactive mesogen mixture (RMM), polyvinylalcohol (PVA), polycarbonate (PC) or cycoolefin polymer (COP).